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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,630	10/17/2003	Teruaki Itoh	160-393 (AMK)	8905

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EXAMINER	
ROSARIO, DENNIS	
ART UNIT	**PAPER NUMBER**
2624	

MAIL DATE	DELIVERY MODE
02/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/686,630	ITOH, TERUAKI	
	Examiner	Art Unit	
	Dennis Rosario	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE 11/27/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/02/07 has been entered.

Response to Amendment

2. The amendment filed on 11/2/07 has been entered on 11/27/07. Claims 1,3 and 5 are pending.

Response to Arguments

3. Applicant's arguments, see Remarks page 5, line 7,8 regarding "simultaneously", filed 11/2/07, with respect to the rejections of claims 1,3,5 and 7 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bonewitz et al. (US Patent 5,926,268) in view of Hooker et al. (US Patent 6,519,356 B1) further in view of Thompson (US Patent 6,571,934 B1) further in view of Leser (US Patent 4,459,487) further in view of Douglas et al. (US Patent 5,926,556).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonewitz et al. (US Patent 5,926,268) in view of Hooker et al. (US Patent 6,519,356 B1) further in view of Thompson (US Patent 6,571,934 B1) further in view of Leser (US Patent 4,459,487) further in view of Douglas et al. (US Patent 5,926,556).

Regarding claim 1, Bonewitz discloses a test tube type discrimination apparatus comprising:

a) first (fig. 6,num. 168a) and second (fig. 6,num. 168c) electronic cameras which simultaneously (not disclosed in Bonewitz) pick up first and second images of a plurality of test tubes (one of which corresponding to fig. 3,num. 114) held in a test tube rack (not disclosed in Bonewitz) one by one from a longitudinal direction (as shown by the optical axis of fig. 5,num. 168) and a lateral direction (as shown by the optical axis of fig. 3,num. 168) of each of the test tubes;

b) a pattern recognition unit (fig. 1, num. 142) which receives data (fig. 1, num. 146) of the first and second images picked up by the first and second electronic cameras and extracts an edge (as shown in figures 9A and 9B as "x" marks) of each of the first and second images to recognize opening and side patterns (as shown in fig. 9A and 9B) of each of the test tubes;

c) a standard pattern memory which stores plural standard opening and side patterns of the test tubes of plural types of test tubes (not disclosed in Bonewitz); and

d) a comparison determination unit which compares the opening and side patterns recognized by the pattern recognition unit and the plural standard opening and side patterns of the test tubes stored in the standard pattern memory to determine a type of each of the test tubes (not disclosed in Bonewitz).

Bonewitz does not teach electronic cameras that simultaneously pick up first and second images and a test tube rack and limitations c) and d).

Hooker teaches using cameras as shown in figure 3B to simultaneously capture an image of one container.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Bonewitz's fig. 6, numerals 168a-c with Hooker's cameras that simultaneously capture a singe container, because Hooker's teaching of fig. 3B "minimizes system complexity" in col. 1, line 63 and permits "the inspecting of containers at high operating speeds" in col. 2, lines 60,61.

The combination of Bonewitz and Hooker still does not teach the claimed test tube rack and limitations c) and d). However, Bonewitz teaches that the invention can be "applied to containers manufactured by a variety of processes" in col. 3, lines 55,56.

Thompson teaches a container as shown in fig. 5, num. 41.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Bonewitz teaching of containers with Thompson's container, because Thompson's containers provide medical and scientific value.

The combination of still does not teach limitations c) and d). However, Bonewitz teaches an "identifying pattern" in col. 3, line 44.

Douglas teaches an identifying pattern as shown in figure 5A, num. 80 and limitation c) of:

a standard pattern memory (corresponding to fig. 6A,num. 114 that represents a program that is executed on memory) which stores plural standard opening patterns (corresponding to fig. 5A) of the test tubes of plural types of test tubes; and

a comparison determination unit (fig. 6A,num. 114) which compares the opening patterns (figures 5A and 5B) recognized by the pattern recognition unit and the plural standard opening patterns (corresponding to the ACTIVE LIST in fig. 6A,num. 114) of the test tubes stored in the standard pattern memory to determine a type (fig. 6A,num. 118 and 120) of each of the test tubes

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Bonewitz teaching of the identifying pattern with Douglas's identifying pattern of fig. 5A, because Douglas's teaching of an identification pattern helps to locate a faulty mold that was used to create the container that was found to have a defect caused by the mold as discussed in col. 1, lines 15-29.

However, the combination of Bonewitz and Hooker and Thompson and Douglas still does not teach limitations c) and d) in the context of the claimed side pattern. However, Bonewitz teaches that fig. 8, num. 236 can be modified with a plurality of inspection methods in order to determine if a container passes or fails an inspection based on data obtained in fig. 8, num. 232.

Leser teaches one such inspection method corresponding to fig. 5 and limitations c) and d) in the context of the claimed side pattern:

c) a standard pattern memory (fig. 5,num. 64) which stores plural standard side patterns of the test tubes of plural types of test tubes; and

d) a comparison determination unit (fig. 5.num. 56) which compares the side patterns (corresponding to fig. 5,num. 12) recognized by the pattern recognition unit and the plural standard side patterns (corresponding to fig. 5,num. 64) of the test tubes stored in the standard pattern memory (fig. 5,num. 64) to determine a type (corresponding to the various plots in fig. 6) of each of the test tubes.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Bonewitz teaching of fig. 8,num. 236 with Leser's teaching of fig.5, because Leser's teaching meets the demands of the necessity of automating the identification of a large number of bottles for sorting purposes as discussed in col. 1, lines 14-22.

Regarding claim 3, Bonewitz of the combination teaches the test tube type discrimination apparatus according to claim 1, wherein the first and second electronic cameras each employ a CCD ("CCD" in col. 5, line 14) as an image pickup device.

Regarding claim 5, Bonewitz of the combination teaches the test tube type discrimination apparatus according to claim 1, further comprising:

a sorting unit (fig. 1,num. 136) which sorts the test tubes whose images are picked up, according to a type based on determination results of the comparison unit.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DR
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